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FIG.1.

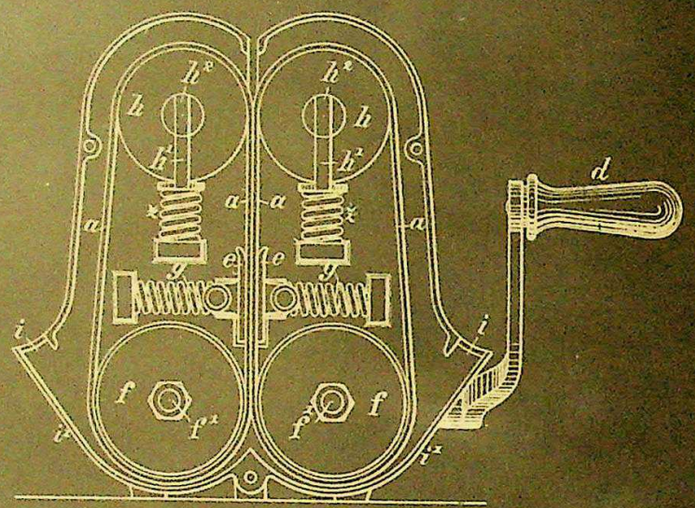


FIG.2.

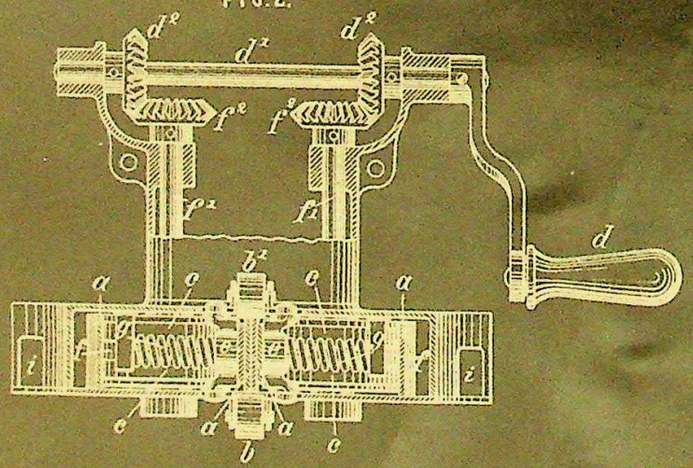


FIG.3.

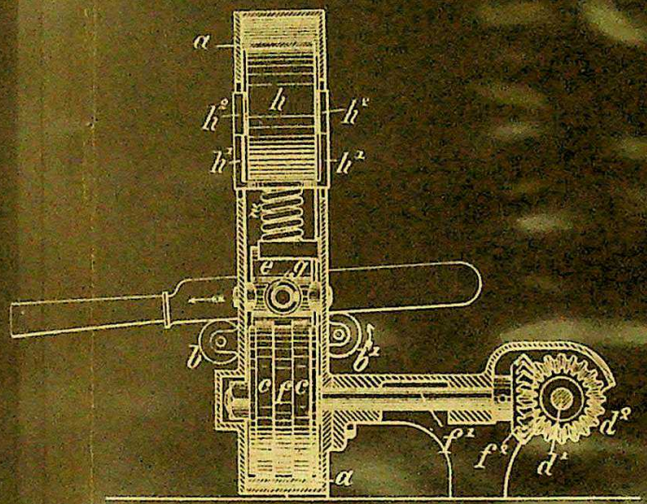
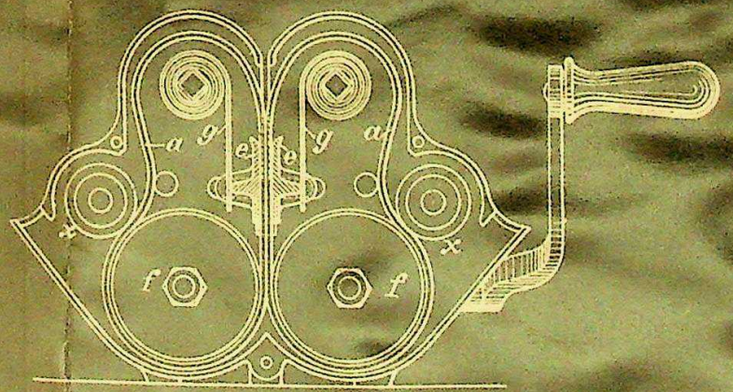


FIG.4.



London: Printed for and Sold by the Printers to the Queen's most Excellent Majesty. 1885

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51—16
51.—GRINDING & POLISHING.
METAL,
Cutlery Scourers.
Britain 1885
Cutlery Scourers

A.D. 1885, 17th OCTOBER. N° 12,413.

PROVISIONAL SPECIFICATION.

Improvements in Machines for Cleaning and Polishing Knives.

I HEINRICH AUGUST HERMANN GUHL of the firm of Guhl & Harbeck of Hamburg, Germany, Manufacturers do hereby declare the nature of my invention for IMPROVEMENTS IN MACHINES FOR CLEANING AND POLISHING KNIVES, to be as follows:—

The invention relates to improvements in machines for cleaning and polishing knives; and the objects of my improvements are first to clean or polish the knives between two endless straps or belts; second to provide means for increasing the friction of such endless straps or belts upon their driving pulleys; third to guide the blade of the knife to be cleaned or polished in its whole length between the endless straps or belts; and fourth to supply the cleaning or polishing material automatically to the endless straps or belts.

Two endless straps or belts are guided by means of pulleys and rollers in such a manner as to run for a part of their length parallel to each other. The driving pulleys are rotated by a hand crank or other suitable gearing.

The rollers are held by means of springs in such position as to keep the belts always tightly stretched. According to a modification of my invention the belts may be guided by the rollers in such a manner as to lay around nearly two thirds of the periphery of the pulleys by placing the rollers closely to the pulleys. In such case the belts are running freely above the pulleys and rollers.

Two plates or guides influenced by springs press the belts where they are running parallelly closely together, the springs and plates being placed inside the space enclosed by the belts.

The blade of the knife to be cleaned or polished is placed between the straps or belts upon rollers in such a manner as to touch nearly with its handle the edges of the belts or straps. As one of the rollers is in contact with the edges of the running belts motion is imparted thereto, which causes the blade to pass for its entire length between the belts at the place where they are pressed together.

[*Price* 8*d.*]

Guhl's Improvements in Machines for Cleaning and Polishing Knives.

The polishing or cleaning material, as for instance sand, emery, tripoli et cetera, is supplied through openings in the shell or case enclosing the working parts of the machine. As the walls of the shell or case are inclined towards the pulleys, the cleaning or polishing material will descend in consequence of its own weight to be taken up by the outer surface of the belts.

In order to increase the frictional hold of the belts upon the pulleys each of the latter is provided with two rings of rubber or other elastic material encircling its periphery in such a manner as to be kept apart from each other.

Dated this 17th day of October 1885.

WM BROOKES & SON,
Agents for the said Heinrich August Hermann Guhl.

COMPLETE SPECIFICATION.

Improvements in Machines for Cleaning and Polishing Knives.

I HEINRICH AUGUST HERMANN GUHL of the firm of Guhl & Harbeck of Hamburgh, Germany, Manufacturers do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The invention relates to improvements in machines for cleaning and polishing knives; and the objects of my improvements are, first, to clean or polish the knives between two endless straps or belts, second, to provide means for increasing the friction of such endless straps or belts upon their driving-pulleys; third, to guide the blade of the knife to be cleaned or polished in its whole length between the endless straps or belts; and, fourth, to supply the cleaning or polishing material automatically to the endless straps or belts.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which, Figure 1 is a front view of a machine provided with my improvements, the front cover being removed therefrom to shew the working parts. Figure 2 is a top view thereof partly in section, and Figure 3 a side elevation of the working parts partly in section. Figure 4 is the front elevation of a modified construction.

Similar letters refer to similar parts throughout the several views.

Two endless straps or belts, a, a, are drawn over the pulleys f and rollers h in such a manner as to run for a part of their length parallel to each other. The pulleys f are rotated by means of a hand-crank, d, or other suitable means, acting upon a shaft, d^1, whereon two bevel-wheels, d^2, are fixed. The wheels d^2 engage into two other bevel wheels, f^2, attached to the parallel shafts f^1, arranged rectangularly to the main shaft d^1. The pulleys f are keyed or otherwise fastened to the shafts f^1 The pivots h^2 of the rollers h are supported by forks h^1, which by means of springs z, are held in such position as to keep the belts a always tightly stretched. The ends of the pivots h^2 and the forks h^1 are guided by vertical slits h^3 of the shell of the machine. Two plates, e, influenced by the springs g, press the belts a closely together, the springs g and plates e being placed inside the space enclosed by the belts a.

The blade of the knife to be cleaned or polished is placed between the straps or belts a upon the rollers b b^1 in such a manner as to touch nearly with its handle the edges of the belts or straps. As the roller b^1 is in contact with the edges of the running belts a, a solid motion is imparted thereto, which causes the blade to pass for its entire length between the belts a at the place where they are pressed together by the springs g and plates e.

The polishing or cleaning material—as, for instance, sand, emery, tripoly, etc,—is supplied through the openings i of the shell enclosing the working parts of the machine. As the walls i^1 of the shell are inclined toward the pulleys f, the cleaning or polishing material will descend by consequence of its own weight that it may be taken up by the outer surface of the belts a.

In order to increase the friction of the belts a upon the pulleys f, each one of the latter is provided with two rings, c, of rubber or other elastic material, encircling its periphery in such a manner as to be kept apart from each other.

Guhl's Improvements in Machines for Cleaning and Polishing Knives.

In the modification shewn in Figure 4 the belts *a* are guided by the rollers *x* placed closely to the pulleys *f* in such a manner as to lay around nearly two thirds of the periphery of the pulleys; so the belts *a* are running freely above the pulleys *f* and the rollers *x*. They are pressed together as in the other construction by the springs *g* influencing the plates *e*; but these springs *g* are of the helical shape instead of the spiral one as above.

Having now particularly described and ascertained the nature of my said Invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In machines for cleaning and polishing knives, the combination of two endless belts or straps running partly parallel to each other, revolving pulleys for driving and supporting the belts, yielding abutment plates for pressing the parallel parts of the belts towards each other, and two rollers for supporting the knife blade, one of which is in contact with and receives rotary motion from the edges of the said belts, substantially as and for the purpose set forth.

2. In machines for cleaning and polishing knives the combination of two endless belts or straps running partly parallel to each other, yielding abutment plates for pressing the parallel parts of the belts towards each other, two rollers for supporting the knife blade one of which is in contact with and receives rotary motion from the edges of the said belts, the rollers *h* and driving pulleys *f* over which the belts are stretched, and the forks h^1 and springs *z* for keeping the said belts tightly stretched, substantially as and for the purpose set forth.

3. In machines for cleaning and polishing knives the combination of a pair of rings *c* with a pulley *f*, substantially as set forth.

4. In machines for cleaning and polishing knives the combination of the rollers *b* b^1 with the endless straps or belts *a*, substantially as described.

5. In machines for cleaning and polishing knives the combination of the springs *g* and plates *e* with the endless straps or belts *a* substantially as specified.

Dated this 12th day of July 1886.

WM BROOKES & SON,
Agents for the said Heinrich August Hermann Guhl.

LONDON: Printed by EYRE AND SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

1886.